Notice of Allowability	Application No.	Applicant(s)	
	10/828,944	SMITH, GREGORY J.	
	Examiner	Art Unit	
	Gary L. Laxton	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed 10/24/2006*.

2. ☒ The allowed claim(s) is/are *1-29*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Gary L. Laxton 4/30/2007
Primary Examiner
Art Unit: 2838

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Brett Hertzberg on 4/17/2007.

The application has been amended as follows:

PLEASE SEE EXAMINER'S AMENDMENT AS ATTACHMENT A.

Finality of Previous Office Action

2. The finality of the rejection of the last Office action is hereby withdrawn.

Allowable Subject Matter

3. Claims 1-29 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Claims 1, 2, 9-12, 21 and 22; prior art fails to disclose or suggest, *inter alia*, a switched mode power converter comprising: an inductor; a sense circuit that is arranged to provide a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a

resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed current in the inductor and the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter.

Claims 3-8; prior art fails to disclose or suggest, *inter alia*, a switched mode power converter comprising: a sense circuit that is arranged to provide a sense signal at a sense terminal that is related to a current in the inductor and a reference voltage only during a selected operating phase of the converter, wherein the selected operating phase corresponds to one of the fast and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, the sense circuit comprising: a resistor circuit that is coupled between a reference terminal and a the sense terminal, and a current sense circuit that is coupled to the resistor circuit via the sense terminal, wherein the reference terminal is arranged to receive the reference voltage, the resistor circuit has a corresponding resistance value, and the current sense circuit is arranged to provide a sense current to the resistor circuit such that the sense signal at the sense terminal corresponds to the difference between the reference voltage and a product of the sense current and the resistance value of the resistor circuit during the selected operating phase and the sense signal at the sense terminal corresponds to the reference voltage during the non-selected operating phase.

Claim 13-20; prior art fails to disclose or suggest, *inter alia*, a switched mode power converter comprising, a sense circuit that is arranged to provide a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates a difference signal as a difference between a

sensed current in the inductor and the reference signal during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense circuit is arranged such that the sense signal corresponds to the reference signal during the non-selected operating phase.

Claim 23, 24 and 27-29; prior art fails to disclose or suggest, *inter alia*, a switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising: a sense means for providing a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed current in the inductor and the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense means is arranged such that the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase.

Claims 25 and 26; prior art fails to disclose or suggest, *inter alia*, a method for adjusting pulse widths associated with a control signal in a switched mode power converter that does not

use an error amplifier and any associated compensation circuits, the method comprising: providing a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed current in the inductor and the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gary L. Laxton
Primary Examiner
Art Unit 2838

4/27/2007

ATTACHEMENT A:

1. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is arranged to provide a sense signal at a sense terminal ~~that is related to a~~, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed current in the inductor and ~~a~~ the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense circuit is arranged such that the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

a feedback circuit that is arranged to provide a feedback signal at a feedback terminal in response to an output signal of the converter, wherein the feedback circuit is arranged such that the feedback signal is variable over more than two values;

a comparator circuit that includes a first input that is ~~coupled to~~ the feedback terminal, a second input that is ~~coupled to~~ the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter; and

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating

phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

2. (Original) The switched mode power converter of claim 1, the switching circuit comprising at least one of: an n-type FET device, a p-type FET device, an n-type MOS device, and a p-type MOS device.

3. (Previously presented) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is arranged to provide a sense signal at a sense terminal that is related to a current in the inductor and a reference voltage only during a selected operating phase of the converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, the sense circuit comprising: a resistor circuit that is coupled between a reference terminal and the sense terminal, and a current sense circuit that is coupled to the resistor circuit via the sense terminal, wherein the reference terminal is arranged to receive the reference voltage, the resistor circuit has a corresponding resistance value, and the current sense circuit is arranged to provide a sense current to the resistor circuit such that the sense signal at the sense terminal corresponds to the difference between the reference voltage and a product of the sense current and the resistance value of the resistor circuit during the selected operating phase, and the sense signal at the sense terminal corresponds to the reference voltage during the non-selected operating phase;

a feedback circuit that is arranged to provide a feedback signal in response to an output signal of the converter at a feedback terminal;

a comparator circuit that includes a first input that is coupled to the feedback terminal, a second input that is coupled to the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter; and

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

4. (Previously presented) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is arranged to provide a sense signal at a sense terminal that is related to a current in the inductor only and a reference voltage during a selected operating phase of the converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, the sense circuit comprising: a first resistor that is coupled between the switching circuit and a supply terminal, a trans-conductance circuit that is arranged to provide a sense current to the sense terminal in response to a voltage across the first resistor, and a second resistor that is coupled between a reference voltage and the sense terminal such that the sense signal corresponds to a

voltage associated with the sense terminal, wherein the sense signal at the sense terminal corresponds to the reference voltage during the non-selected operating phase;

a feedback circuit that is arranged to provide a feedback signal at a feedback terminal in response to an output signal of the converter;

a comparator circuit that includes a first input that is coupled to the feedback terminal, a second input that is coupled to the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter; and

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

5. (Original) The switched mode power converter of claim 4, wherein the first resistor corresponds to at least one of: a metal interconnect material that is coupled to the switching circuit, a resistive material that is coupled to the switching circuit, and an on-resistance that is associated with the switching circuit.

6. (Previously Presented) The switched mode power converter of claim 4, wherein the switching circuit is arranged to couple current from the inductor to the first resistor during the first operating phase of the converter.

7. (Previously Presented) The switched mode power converter of claim 4, further comprising a diode that is arranged to couple current through the first resistor and the inductor during the second operating phase of the converter.

8. (Previously Presented) The switched mode power converter of claim 4, wherein the reference voltage is provided by a band-gap circuit.

9. (Currently Amended) The switched mode power converter of claim 1, wherein the feedback circuit is arranged such that the feedback signal is one of: equal to the output signal, an offset version of the output signal, a gain scaled version of the output signal, ~~and~~ or a divided version of the output signal.

10. (Currently Amended) The switched mode power converter of claim 1, wherein the feedback circuit corresponds to ~~at least~~ one of: a direct connection, a unity gain amplifier circuit, an amplifier circuit with a gain of less than one, an amplifier circuit with a gain of greater than one, a resistor divider circuit, a capacitor divider circuit, ~~and~~ or a stacked diode circuit.

11. (Original) The switched mode power converter of claim 1, wherein the one-shot circuit comprises at least one of: an RS-type flip-flop circuit, a delay circuit, and a ramp generator circuit.

12. (Original) The switched mode power converter of claim 1, wherein the one-shot circuit comprises a ramp generator circuit that has an adjustable ramp rate that is variable in response to a bias signal.

13. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising,

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is arranged to provide a sense signal at a sense terminal ~~that is related to a~~ , wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates a difference signal as a difference between a

sensed current in the inductor and ~~a~~ the reference signal during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense circuit is arranged such that the sense signal corresponds to the reference signal during the non-selected operating phase;

a feedback circuit that is arranged to provide a feedback signal at a feedback terminal in response to an output signal of the converter;

a comparator circuit that includes a first input that is ~~coupled to~~ the feedback terminal, a second input that is ~~coupled to~~ the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter;

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a ~~variable~~ pulse-width that is varied during the non-selected operating phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter, wherein the one-shot circuit is arranged to adjust the pulse-width in response to a bias signal for the one-shot circuit; and

a PLL circuit that is arranged to provide ~~a~~ the bias signal for the one-shot circuit based on a comparison between a reference frequency and a feedback frequency that is associated with the control signal.

14. (Original) The switching mode power converter of claim 13, wherein the PLL circuit is arranged to phase align the reference frequency and the feedback frequency.

15. (Original) The switching mode power converter of claim 13, wherein the PLL circuit comprises a trans-conductance circuit that is arranged to provide at least a portion of the biasing signal.

16. (Original) The switched mode power converter of claim 15, further comprising a current source that is arranged to provide another portion of the biasing signal.

17. (Original) The switched mode power converter of claim 16, wherein the current source is arranged such that the other portion of the biasing signal varies proportional to changes in a supply voltage.

18. (Original) The switched mode power converter of claim 16, wherein the current source is arranged to set a minimum operating frequency for the PLL circuit.

19. (Original) The switched mode power converter of claim 15, further comprising a resistor that is arranged to provide another portion of the biasing signal.

20. (Previously Presented) The switched mode power converter of claim 15, wherein the trans-conductance circuit has a trans-conductance parameter that varies proportional to changes in a supply voltage.

21. (Original) The switched mode power converter of claim 1, further comprising a diode, wherein the switching circuit is arranged to couple energy from an input terminal to the inductor such that the inductor is charged during the first operating phase of the converter, and wherein the diode is arranged to provide a conduction path for the inductor during the second operating phase of the converter.

22. (Original) The switched mode power converter of claim 1, further comprising a diode that is arranged to permit current to flow to the load circuit from the inductor, wherein the

switching circuit is arranged to couple the inductor between an input terminal and a ground terminal such that the inductor is charged during the first operating phase of the converter.

23. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching means for periodically energizing the inductor in response to a control signal, wherein the switching means is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense means for providing a sense signal at a sense terminal ~~that is related to a~~ , wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed current in the inductor and ~~a~~ the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense means is arranged such that the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

a comparison means that includes a first input that is ~~coupled to~~ the sense terminal, and a second input responsive to an output signal associated with the load circuit, and an output for providing a start signal, wherein the comparison means is arranged for asserting a start signal when the output signal associated with the load circuit reaches a threshold during the selected operating phase of the converter, wherein the output signal is variable over more than two values, and wherein the threshold is associated with the sense signal; and

a pulse means for initiating the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the

converter, wherein the inductor, the switching means, the sense means, the comparison means, and the pulse means are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

24. (Original) The switched mode power converter of claim 23, further comprising a phase-locked-loop means for adjusting a pulse-width associated with control signal during the selected operating phase of the converter.

25. (Currently Amended) A method for adjusting pulse widths associated with a control signal in a switched mode power converter that does not use an error amplifier and any associated compensation circuits, the method comprising:

periodically energizing an inductor with a switching circuit that is responsive to the control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

providing a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed ~~that is related to a~~ current in the inductor and ~~a~~ the reference signal only during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

comparing an output signal associated with the load circuit to the sense signal from the sense terminal;

asserting a start signal in response to the comparison when the output signal associated with the load circuit reaches a threshold during the selected operating phase of the converter,

wherein the output signal is variable over more than two values, and wherein the threshold is associated with the sense signal; and

initiating the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter.

26. (Original) The method of claim 25, further comprising adjusting a pulse-width associated with control signal during the selected operating phase of the converter with a phase locked loop.

27. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching means for periodically energizing the inductor in response to a control signal, wherein the switching means is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense means for providing a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed ~~that is related to a~~ current in the inductor and ~~a~~ the reference signal during a selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein a non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense means is arranged such that the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

an isolation means that is arranged to isolate the sense means from the inductor during the non-selected operating phase of the converter;

a comparison means for comparing an output signal associated with the load circuit to the sense signal and asserting a start signal when the output signal associated with the load circuit reaches a threshold during the selected operating phase of the converter, wherein the output signal is variable over more than two values, and wherein the threshold is associated with the sense signal; and

a pulse means for initiating the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter, wherein the inductor, the switching means, the sense means, the isolation means, the comparison means, and the pulse means are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

28. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is selectively coupled to the inductor during a selected operating phase of the converter via the switching circuit, and wherein the sense circuit is decoupled from the inductor during the non-selected operating phase of the converter, wherein the sense circuit is arranged to provide a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed ~~that is related to a~~ current in the inductor and ~~a~~ the reference signal during the selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein the non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense circuit is

arranged such that the sense signal is variable over more than two values, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

a feedback circuit that is arranged to provide a feedback signal at a feedback terminal in response to an output signal of the converter, wherein the feedback circuit is arranged such that the feedback signal is variable over more than two values;

a comparator circuit that includes a first input that is coupled to the feedback terminal, a second input that is coupled to the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter; and

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.

29. (Currently Amended) A switched mode power converter that is arranged to provide an output signal to a load circuit, the switched mode power converter comprising:

an inductor;

a switching circuit that is coupled to the inductor and arranged to periodically energize the inductor in response to a control signal, wherein the switching circuit is operated in: a closed circuit position during a first operating phase of the converter, and an open circuit position during a second operating phase of the converter;

a sense circuit that is selectively coupled to the inductor during a selected operating phase of the converter, and wherein the sense circuit is decoupled from the inductor during the non-selected operating phase of the converter, wherein the sense circuit is arranged to provide a sense signal at a sense terminal, wherein a reference signal is coupled to the sense terminal via a resistor such that the sense terminal is a summing junction that generates the sense signal as a difference between a sensed ~~that is related to a~~ current in the inductor and ~~a~~ the reference signal

during the selected operating phase of the converter, wherein the reference signal is different from a signal ground associated with the switched mode power converter, wherein the selected operating phase corresponds to one of the first and second operating phases of the converter, and wherein the non-selected operating phase of the converter corresponds to the other of the first and second operating phases of the converter, wherein the sense signal at the sense terminal corresponds to the reference signal during the non-selected operating phase;

a diode circuit that is arranged to: couple the sense circuit to the inductor during the selected operating phase of the converter, and isolate the sense circuit from the inductor during the non-selected operating phase of the converter;

a feedback circuit that is arranged to provide a feedback signal at a feedback terminal in response to an output signal of the converter;

a comparator circuit that includes a first input that is ~~coupled to~~ the feedback terminal, a second input that is ~~coupled to~~ the sense terminal, and an output that is arranged to assert a start signal when the feedback signal and the sense signal are approximately equal during the selected operating phase of the converter; and

a one-shot circuit that is arranged to initiate the control signal when the start signal is asserted such that the control signal has a variable pulse-width during the non-selected operating phase of the converter, wherein the inductor, the switching circuit, the sense circuit, the diode circuit, the feedback circuit, the comparator circuit, and the one shot circuit are arranged such that error amplifier and associated compensation circuits are unnecessary in the switched mode power converter.